

CLAIMS

[1] A polyamide resin composition comprising mainly m-xylylenediamine (MXDA) as a diamine component and mainly adipic acid (AA) as a dicarboxylic acid component, wherein the polyamide resin composition has a back pressure increasing coefficient K^* satisfying the following equation (1):

$$0 < K^* < 15 \quad (1)$$

wherein K^* represents a back pressure increasing coefficient expressed by the following equation:

$$K^* = [\Delta P \text{ (MPa)} / T \text{ (hr)}] / [Q \text{ (kg/hr)} / S \text{ (cm}^2\text{)}]$$

wherein ΔP (MPa) represents a difference between an initial secondary pressure of a gear pump and a secondary pressure thereof after a lapse of T (hr); T (hr) represents a period of time of filtering the polyamide resin composition with a filter; Q (kg/hr) represents a discharge amount of the polyamide resin composition; S (cm²) represents a filtering area of the filter; and the filter has a filtering diameter of 20 μm .

[2] The polyamide resin composition described in claim 1, wherein the polyamide resin composition has a back pressure increasing coefficient K^* satisfying the following equation (2):

$$0 < K^* < 5 \quad (2)$$

wherein K^* represents a back pressure increasing coefficient expressed by the following equation:

$$K^* = [\Delta P \text{ (MPa)} / T \text{ (hr)}] / [Q \text{ (kg/hr)} / S \text{ (cm}^2\text{)}]$$

wherein ΔP (MPa) represents a difference between an initial secondary pressure of a gear pump and a secondary pressure thereof after a lapse of T (hr); T (hr) represents a period of time of filtering the polyamide resin composition with a filter; Q (kg/hr) represents a discharge amount of the polyamide resin composition; S (cm²) represents a filtering area of the filter; and the filter has a filtering diameter of 20 μm .

[3] A polyamide resin composition comprising mainly *m*-xylylenediamine (MXDA) as a diamine component and mainly

adipic acid (AA) as a dicarboxylic acid component, the polyamide resin composition having contents of phosphorous atoms (P) and sodium atoms (Na) satisfying the following equations (3) and (4):

$$30 \leq P < 200 \text{ ppm} \quad (3)$$

$$3.0 < \text{Na/P (molar ratio)} < 7.0 \quad (4)$$

[4] The polyamide resin composition as described in claim 3, wherein the polyamide resin composition has a Co-b value satisfying the following equation (5):

$$-3 < \text{Co-b} < 10 \quad (5)$$

[5] A polyamide resin composition comprising mainly m-xylylenediamine (MXDA) as a diamine component and mainly adipic acid (AA) as a dicarboxylic acid component, the polyamide resin composition having contents of phosphorous atoms (P) and an alkali metal (M) satisfying the following equations (6) and (7):

$$0 \leq P < 30 \text{ ppm} \quad (6)$$

$$0.1 \leq M < 45 \text{ ppm} \quad (7)$$

wherein M represents an alkali metal species, such as Na, Li and K.

[6] The polyamide resin composition as described in claim 5, wherein the polyamide resin composition has a Co-b value satisfying the following equation (8):

$$3 < \text{Co-b} < 10$$

(8)